Patent claims

1. Melting furnace having an electric or external heating system for storing melts and having a melt discharge outlet comprising a cooling device, **characterised in that** an instrument for mechanically removing plugs blocking the melt discharge outlet is arranged at the melt discharge outlet.
2. Device according to claim 1, **characterised in that** the instrument for removing plugs is mounted at the side of the melt discharge outlet, and does not block the melt discharge outlet when in a rest position.
3. Device according to claim 12, **characterised in that** the rest position is cooled and shielded from the heat radiation heating the melting furnace.
4. Device according to one of the preceding claims, **characterised in that** the instrument for removing the plugs has an internal cooling system.
5. Device according to one of the preceding claims, **characterised in that** the instrument for removing the plugs can be moved in the plane perpendicular to the outflow direction of the melt.
6. Device according to the preceding claim, **characterised in that** the instrument can be moved in a circular path.
7. Device according to one of the two preceding claims, **characterised in that** the instrument has a hydraulic drive mechanism.
8. Device according to one of the preceding claims, **characterised in that** the instrument for removing the plugs is sword-shaped, the cutting edge being aligned in the plane perpendicular to the outflow direction of the melt.
9. Device according to one of the preceding claims, **characterised in that** the melt discharge outlet has a diameter of 200 mm to 800 mm, preferably 500 mm.
10. Device according to one of the preceding claims, **characterised in that** a water-cooled copper ring is arranged above the melt discharge outlet.
11. Device according to one of the preceding claims, **characterised by** a recording mechanism which is triggered by the instrument for removing the plugs in the rest position, for detecting this position of the instrument for removing the plugs.

12. Method for removing plugs which have formed on a melt discharge outlet given according to one of claims 1 to 10 and which are blocking the melt discharge outlet, **characterised in that** the plugs are removed by breaking- or knocking- or splitting-away with the aid of the instrument for removing plugs given according to one of claims 1 to 11.

13. Method according to claim 12, **characterised in that** the knocking-, breaking- or splitting-away process is undertaken periodically with cycle times of 1 to 3 seconds.

14. Method according to claim 12 or 13, **characterised in that** the instrument for removing plugs is moved in a plane perpendicular to the outflow of the melt.

15. Method according to claim 12, 13 or 14, **characterised in that** the instrument for removing plugs moves in a circular path which covers the entire melt discharge.

16. Method according to one of claims 12 to 15, **characterised in that** the instrument for removing plugs is moved hydraulically.

17. Method according to one of claims 12 to 16, **characterised in that** the instrument for removing the plugs triggers in its rest position a mechanism for recording that it has assumed the end position, and when the rest position has not been assumed by the instrument for removing the plugs within a preset time interval, a more intensive mechanism for removing plugs is switched on or a warning signal is emitted.